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ABSTRACT

The major innovation of the American Psychiatric Association's "Diagnostic and Statistical Manual III" (DSM-III) was the explicit specification of criteria for determining whether an individual's problems qualify for a particular diagnosis. However, neither the choice of child diagnostic categories in DSM-III nor the choice of criteria to define each category was based on empirical findings. In this paper, an approach to taxonomy is developed that involves quantitative analyses of standardized assessment data to identify groupings of problems that tend to co-occur, as reported by each type of informant. Primarily by using factor analysis and principal-components analysis, syndromes of co-occurring problems are derived. The overall approach is called "Multiaxial Empirically Based Assessment and Taxonomy." Eight cross-informant syndrome constructs are derived from parent-, teacher-, and self-reports. A computerized profile is developed for scoring an individual child in terms of the eight cross-informant syndromes normed for that child's sex and age and the type of informant. Cluster analyses of profiles, performed in 1993, are being used to identify children who share patterns of syndrome scores. Fourteen figures present analysis data. (Contains 4 references.) (SLD)

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ED 377 249

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NEW DEVELOPMENTS IN EMPIRICALLY BASED ASSESSMENT AND TAXONOMY OF CHILD/ADOLESCENT BEHAVIORAL AND EMOTIONAL PROBLEMS

Thomas M. Achenbach, Ph.D.

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The study of psychopathology has been blessed (or cursed?) with a superabundance of theories and conceptual paradigms. The psychodynamic, behavioral, and family systems paradigms have been especially influential in shaping views and practices related to child and adolescent psychopathology. (For brevity, I'll use "child" to include "adolescent.") Since 1980, the American Psychiatric Association's Diagnostic and Statistical Manual's (DSM) paradigm has become an especially powerful influence. This paradigm has had a major impact on research, training, and the vocabulary of mental health professionals. To a much greater extent then in the preceding decades, mental health professionals of the 1980s and 1990s have become preoccupied with matching their clients' problems to the DSM diagnostic categories. It is perhaps no coincidence that insurance companies and other third party payers have also become increasingly preoccupied with the DSM diagnostic categories as a basis for reimbursement.

The major innovation of DSM-III was the explicit specification of criteria for determining whether an individual's problems qualified for a particular diagnosis. The DSM-III criteria for some major adult disorders were based on Research Diagnostic Criteria (RDC) that had been developed during the 1970s. The development of such criteria was an

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important step toward a more empirical basis for the study of certain adult disorders, such as schizophrenia and bipolar conditions. However, there had been no Research Diagnostic Criteria for childhood disorders. Neither the choice of child diagnostic categories in DSM-III nor the choice of criteria to define each category were based on empirical findings.

The term "diagnosis" carries an aura of clinical authority that may obscure ambiguities arising in part from the multiple meanings of diagnosis. One meaning of diagnosis refers to the assignment of a set of problems to a category of a classification system, such as the DSM (e.g., Guzé, 1978, p. 53). A second meaning of diagnosis refers to gathering data about individuals in order to determine what their problems are. And a third meaning of diagnosis refers to diagnostic formulations, which involve comprehensive statements about individuals' problems, usually including inferences about underlying causes.

In reference to children's behavioral and emotional problems, the multiple meanings of the term diagnosis may be a source of confusion, especially when intended to mean classification according to DSM criteria. As an example, consider one of the most common diagnoses of children, the category that DSM-III called Attention Deficit Disorder with Hyperactivity. A child was diagnosed (that is, classified) as having this disorder if the clinician decided that the child manifested three features from one list of five, three from a second list of six, and two from a third list of five features. In DSM-III-R (American Psychiatric Association, 1987), the diagnostic label was changed to Attention Deficit Hyperactivity Disorder and the criterion was eight features out of a list of 14. In DSM-IV, there are two lists of descriptive features. A child can qualify for the diagnostic category by having a specified number of features from either list.

There has been no systematic calibration of the criteria from one version of DSM to the next. Furthermore, none of the DSMs has specified diagnostic procedures for determining whether each feature is present or absent. And, despite abundant research on attention deficit disorders as defined by the DSM, the DSM still provides little basis for making diagnostic formulations about individual children who meet the criteria, especially no firm causal inferences.

As applied to the DSM, the term "diagnosis" refers primarily to classification within the categories of a particular edition of the DSM. It does not refer to particular diagnostic procedures for determining whether or not the criterial features are present in a case and it does not refer to diagnostic formulations or to a basis for causal inferences. Furthermore, the marked changes in DSM criteria from 1980 to '87 and '94 mean that many children would receive different diagnoses according to the different editions, even if identical diagnostic procedures were used.

To avoid both the confusion and implication of clinical authority associated with the term diagnosis, we have endeavored to separate two types of task whose differences are blurred by the term diagnosis. One task is gathering data to identify the distinguishing features of individuals. This task can be more neutrally referred to as assessment. The second task is to use the data regarding distinguishing features to determine what features and patterns resemble those found for other individuals. This task can be referred to as taxonomy, which is the systematic derivation of classifactory groupings from research on the features that distinguish between individuals.

There are many possible approaches to assessment and taxonomy. We have chosen an assessment approach designed to obtain data in a similar standardized format from a variety of informants who see children under different conditions. Our approach to taxonomy involves quantitative analyses of standardized assessment data to identify groupings of problems that tend to co-occur, as reported by each type of informant. Primarily by using factor analysis and principal components analysis, we have derived syndromes of co-occurring problems reported by parents, teachers, direct observers, clinical interviewers, and the subjects themselves. (I use the word syndrome in its generic sense of problems that tend to co-occur, without any assumptions about disease entities or biological versus environmental reasons for the co-occurrence of particular problems.)

We have previously concentrated on ages 2 to 18. However, because subjects in some of our longitudinal and follow-up studies are now well into their 20's, we have also developed upward extensions of our instruments for young adults. We have continually endeavored to bring research and practice closer together by developing standardized procedures that can be similarly used by researchers and practitioners across a wide variety of settings.

Multiaxial Empirically Based Assessment and Taxonomy

We call our overall approach "Multiaxial Empirically Based Assessment and Taxonomy." The multiple axes refer to the different sources and kinds of data relevant to the assessment of most children, as illustrated in the first slide.

---Slide 1. Multiaxial Assessment---

When we first derived syndrome scales for scoring problems, we did it separately for each sex and age group on each instrument. Although some syndromes had counterparts in all groups, there were many variations among the syndromes found for boys versus girls, different ages, and different sources of data.

1991 Cross-Informant Syndromes

In 1991, we undertook a major revision of syndromes designed to derive syndrome constructs that were applicable to both sexes, different ages, and data from different informants (Achenbach, 1991). This was intended to facilitate longitudinal and follow-up assessments, comparisons of data from different sources for the same child, and comparisons between children of both sexes and different ages. However, we also preserved important differences between syndromes found for each sex, different ages, and different informants. We did this by retaining additional items and syndromes that were specific to one sex, particular ages, or a particular instrument. We also normed all syndromes separately for each sex, particular ages, and each type of informant. The next slide summarizes the steps taken to derive the syndromes common to both sexes, different ages, and parent-, teacher-, and self-ratings.

---Slide 2. Derivation of 1991 syndromes---

The next slides show the items that define the eight cross-informant syndrome constructs derived from parent-, teacher-, and self-reports.

---Slides 3 & 4. Items defining cross-informant constructs---

The next slide provides another way of looking at relations between our initial assessment operations, derivation of the cross-informant constructs, and application of the constructs to the assessment of new cases.

---Slide 5. Latent variable.---

The next slide shows a computerized version of the profile for scoring an individual child in terms of the eight cross-informant syndromes, normed for that child's sex and age and the particular type of informant.

---Slide 6. Computerized profile.---

1993 Profile Types

In 1993, we have taken another step toward linking empirically based assessment to empirically based taxonomy (Achenbach, 1993). This has entailed doing cluster analyses of profiles in order to identify groups of children who share similar patterns of syndrome scores. The next slides outline the derivation of profile types.

---Slides 7 & 8. Derivation of profile types.---

The next slide shows you what is meant by a centroid that is constructed by averaging two or more profiles and then serves as the operational definition of the profile type shared by those profiles.

---Slide 9. Centroid.---

The next slide illustrates the overall clustering strategy used to derive profile types.

---Slide 10. Clustering strategy.---

The next slide illustrates the centroids of the six profile types derived from the Teacher's Report Form (TRF).

---Slide 11. TRF profile types.---

In order to facilitate comparisons between data from different informants, a cross-informant computer program is available. The 1993 upgrade of this program allows you to input data from any combination of five parent-, teacher-, and self-rating forms. The program scores and prints out profiles for all the individual forms. It also displays side-by-side comparisons of the item scores and scale scores obtained from each informant and the intraclass correlations with the profile types derived from each type of informant, as illustrated in the next slides.

---Slides 12 & 13. Cross-informant printouts.---

The cross informant comparisons also display Q correlations between the item and scale scores for each pair of informants.

The next slide summarizes the current status of empirically based assessment and taxonomy involving parent-, teacher-, and self-reports.

---Slide 14. Current status of assessment & taxonomy---

Whatever form our evolving health care systems take, it will be incumbent on mental health professionals who work with children to maximize the effectiveness of what will probably be scarce resources. We feel that standardized empirically based assessment and taxonomy can contribute to this effort by improving the reliability, validity, and efficiency of clinical decision-making and communication across a wide range of settings.

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American Psychiatric Association, (1980, 1987, 1994). *Diagnostic and statistical manual of mental disorders* (3rd ed., 3rd rev. ed., 4th ed.). Washington, D.C.: Author.

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EXAMPLES OF MULTIAXIAL ASSESSMENT

PARENT DATA	*TEACHER DATA*	*COGNITIVE TEST DATA*	*MEDICAL DATA*	*DIRECT ASSESSMENT OF CHILD*
1. CHILD BEHAVIOR CHECKLIST	1. TEACHER'S REPORT FORM	1. ABILITY	1. NEUROLOGICAL EXAM	1. DIRECT OBSERVATION FORM
2. INTERVIEW	2. INTERVIEW	2. ACHIEVEMENT	2. RELEVANT ILLNESSES	2. YOUTH SELF-REPORT
a. DEVELOPMENTAL HISTORY	a. DETAILS OF PRESENT PROBLEMS	3. PERCEPTUAL-MOTOR FUNCTIONING	3. HANDICAPS	3. INTERVIEW
b. DETAILS OF PRESENT PROBLEMS	b. RELEVANT BACKGROUND	4. SPEECH AND LANGUAGE	4. MEDICATIONS	a. CHILD'S VIEWS OF PROBLEMS
c. RELEVANT BACKGROUND	c. WORKABILITY FOR INTERVENTIONS			b. INTERPERSONAL COMPETENCIES
d. WORKABILITY FOR INTERVENTIONS				c. WORKABILITY FOR INTERVENTIONS

Figure 1. Multiaxial assessment

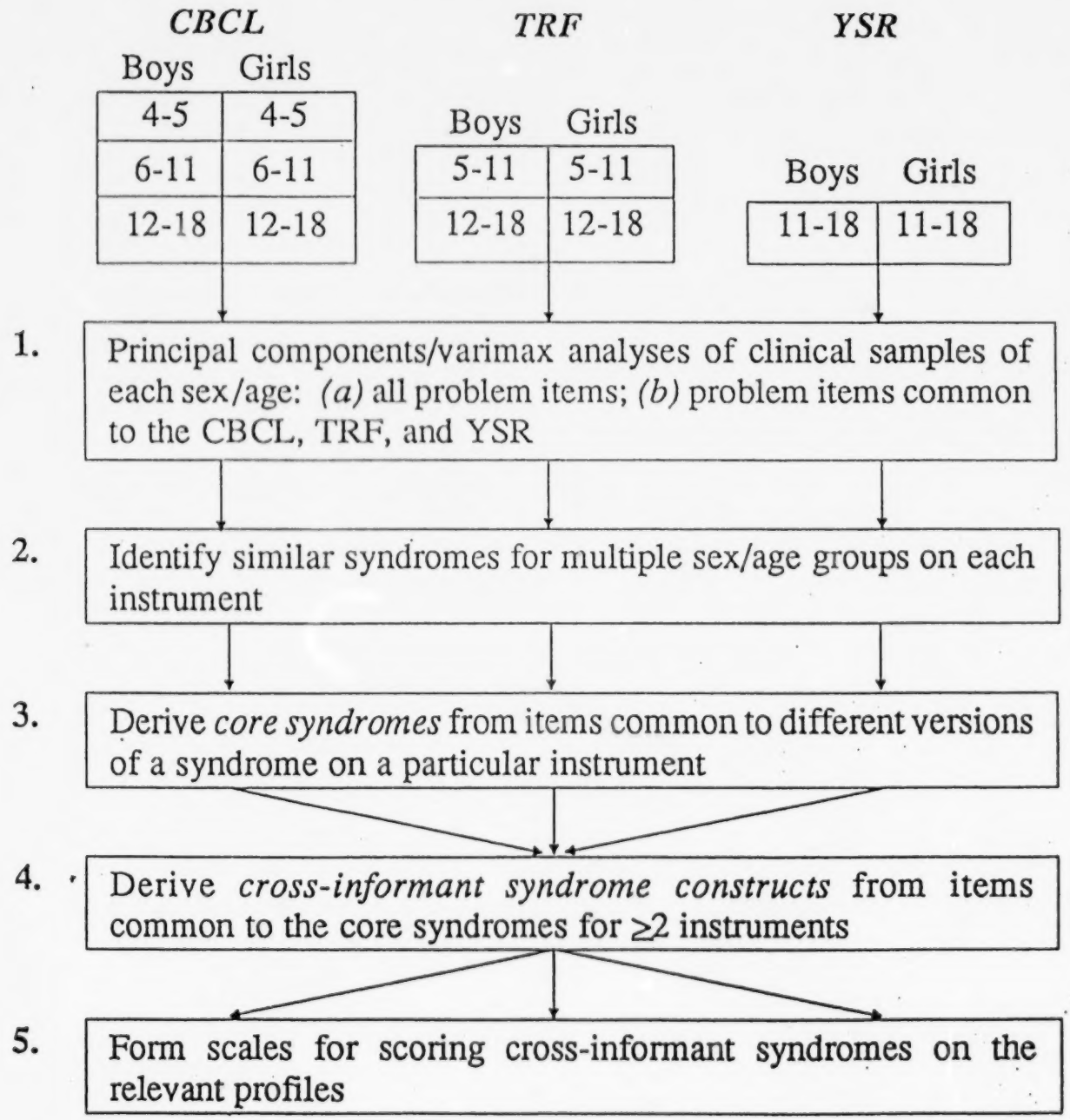
CBCL
Boys Girls
4-5 4-5
6-11 6-11
12-18 12-18
TRF
Boys Girls
5-11 5-11
12-18 12-18
YSR
Boys Girls
11-18 11-18
1. Principal components/varimax analyses of clinical samples of each sex/age: (a) all problem items; (b) problem items common to the CBCL, TRF, and YSR
2. Identify similar syndromes for multiple sex/age groups on each instrument
3. Derive core syndromes from items common to different versions of a syndrome on a particular instrument
4. Derive cross-informant syndrome constructs from items common to the core syndromes for ≥2 instruments
5. Form scales for scoring cross-informant syndromes on the relevant profiles

Figure 2. Derivation of 1991 cross-informant syndromes.

Items Defining the Cross-Informant Constructs

CBCL, TRF, & YSR

Aggressive Behavior	*Anxious/Depressed*
Argues	Cries a lot
Attacks people	Fearful, anxious
Brags	Fears impulses
Bullies	Feels inferior, worthless
Demands attention	Feels persecuted
Destroys others' things	Feels too guilty
Destroys own things	Feels unloved
Disobedient at school	Lonely
Fights	Needs to be perfect
Jealous	Nervous, tense
Loud	Self-conscious
Screams	Suspicious
Shows off	Unhappy, sad, depressed
Stubborn, irritable	Worries
Sudden mood changes	
Talks too much	
Teases	
Temper tantrums	
Threatens	

Figure 3. Items defining cross-informant syndrome constructs.

CBCL, TRF, & YSR (cont'd)

Attention Problems

Acts too young
Can't concentrate
Can't sit still
Confused
Daydreams
Impulsive
Nervous, tense
Poor school work
Poorly coordinated
Stares blankly

Delinquent Behavior

Alcohol, drugs
Bad companions
Doesn't feel guilty
Lies
Prefers older kids
Sets fires
Steals at home
Steals outside home
Swearing, obscenity
Truancy

Social Problems

Acts too young
Doesn't get along w. peers
Gets teased
Not liked by peers
Poorly coordinated
Prefers younger kids
Too dependent

Somatic Complaints

Aches, pains
Dizziness
Eye problems
Headaches
Nausea
Overtired
Rashes, skin problems
Stomachaches
Vomiting

Thought Problems

Can't get mind off thoughts
Hears things
Repeats acts
Sees things
Strange behavior
Strange ideas

Withdrawn

Would rather be alone
Refuses to talk
Secretive
Shy, timid
Stares blankly
Sulks
Underactive
Unhappy, sad, depressed
Withdrawn

Figure 4. Items defining cross-informant syndrome constructs (cont.).

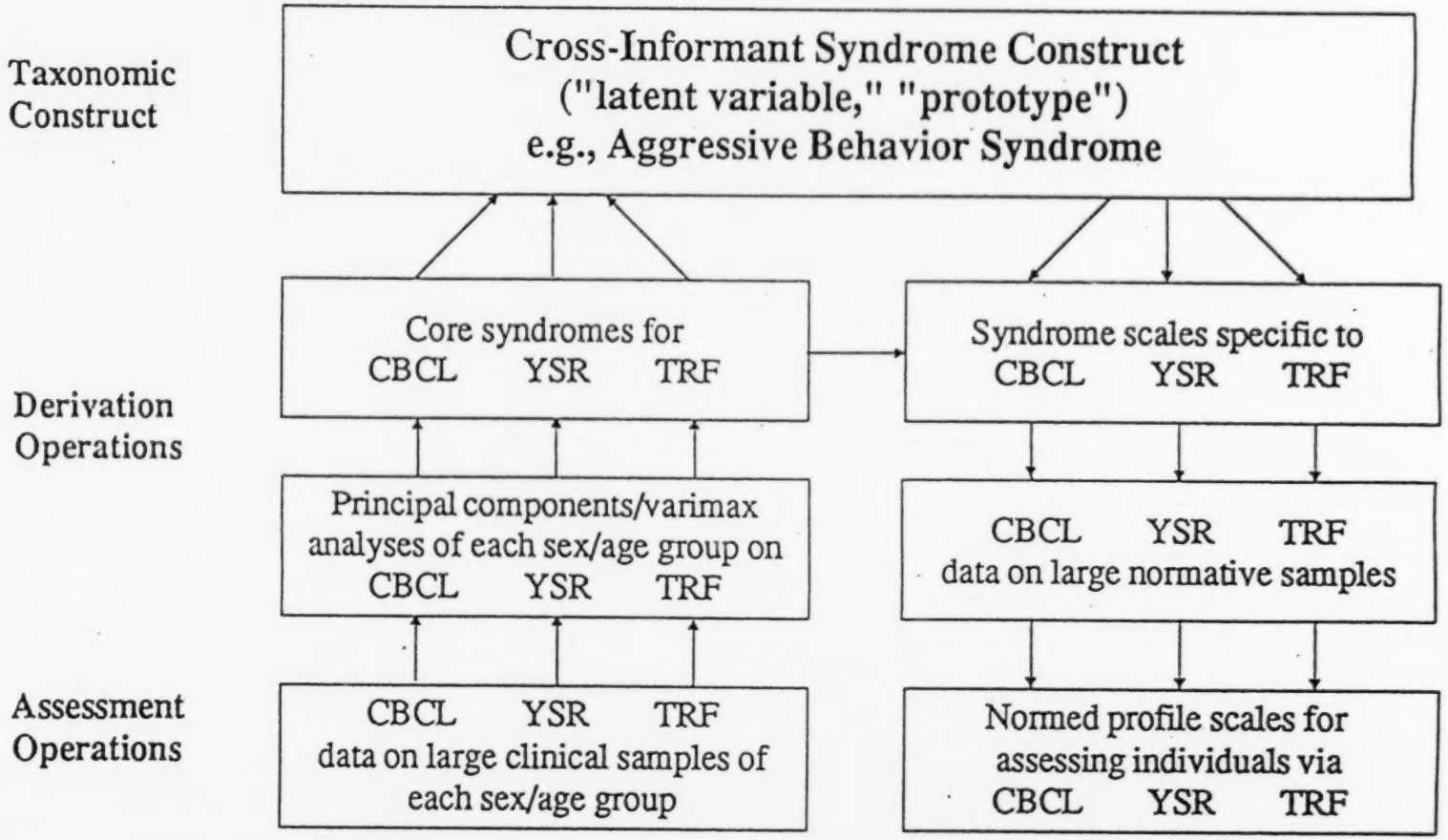

Figure 5. Relations between derivation of syndromes, formation of cross-informant syndrome constructs, and construction of profile scales.

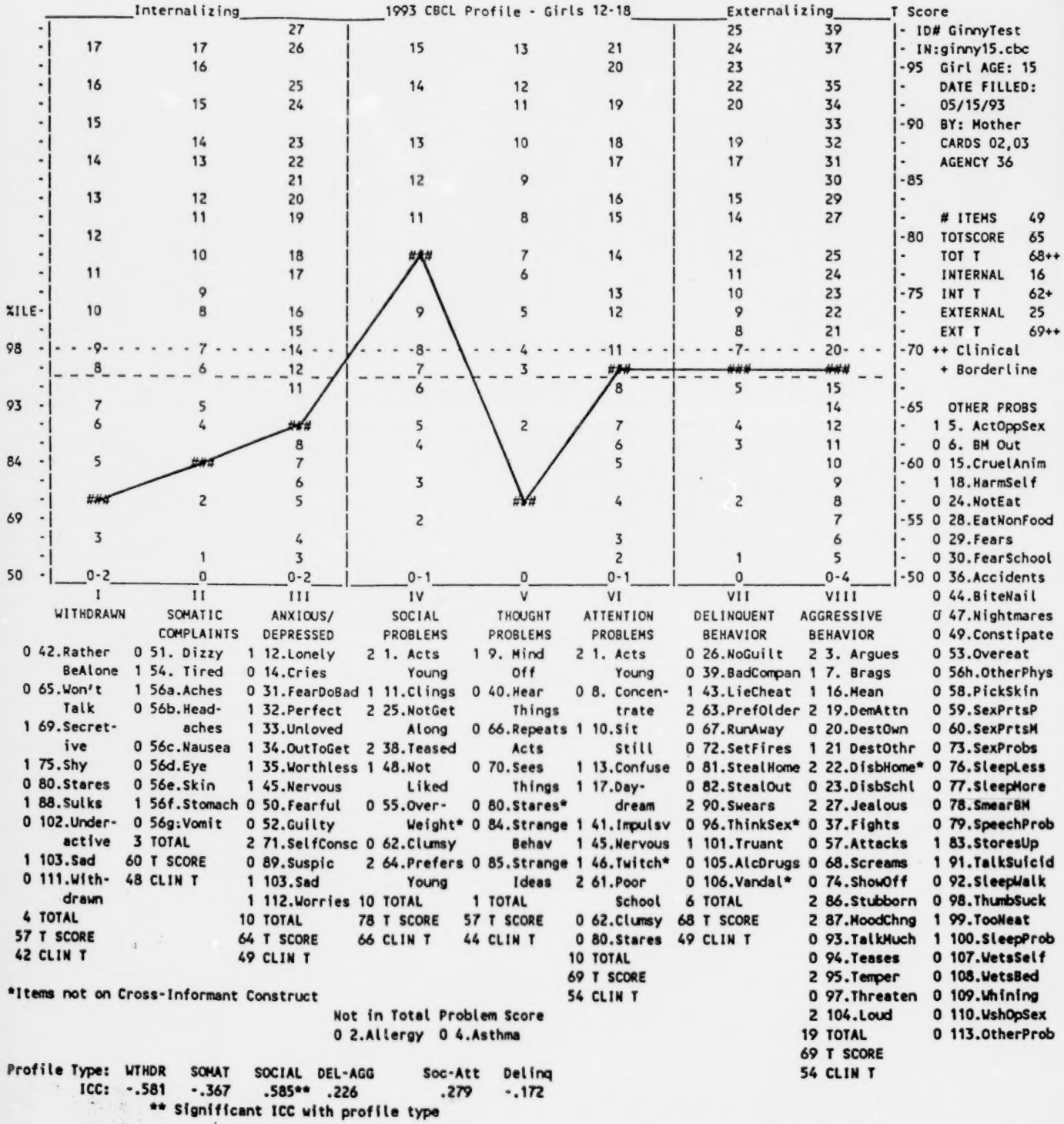

Figure 6. Computer-scored version of profile for scoring behavioral/emotional problems.

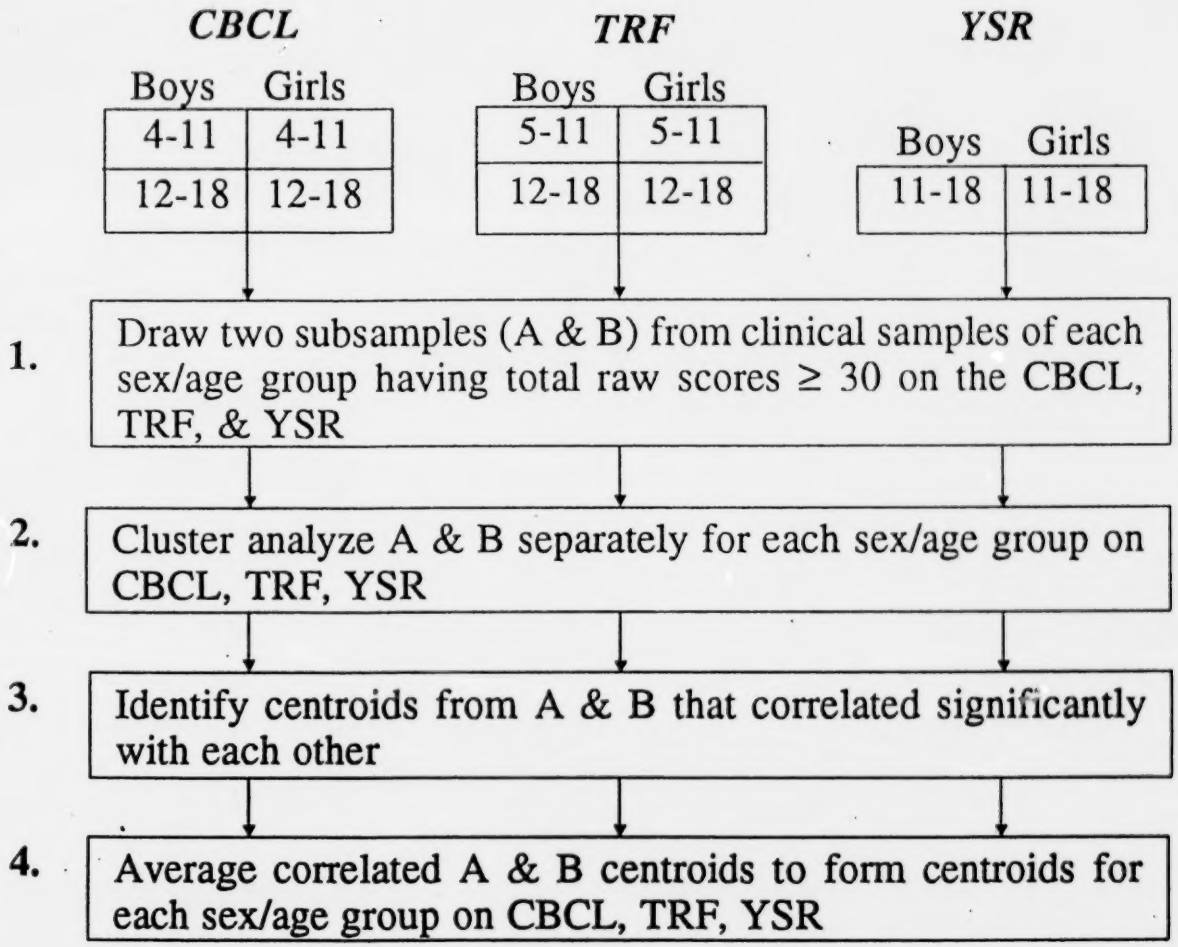
CBCL
Boys Girls
4-11 4-11
12-18 12-18
TRF
Boys Girls
5-11 5-11
12-18 12-18
YSR
Boys Girls
11-18 11-18
1. Draw two subsamples (A & B) from clinical samples of each sex/age group having total raw scores ≥ 30 on the CBCL, TRF, & YSR
2. Cluster analyze A & B separately for each sex/age group on CBCL, TRF, YSR
3. Identify centroids from A & B that correlated significantly with each other
4. Average correlated A & B centroids to form centroids for each sex/age group on CBCL, TRF, YSR

Figure 7. Derivation of profile types.

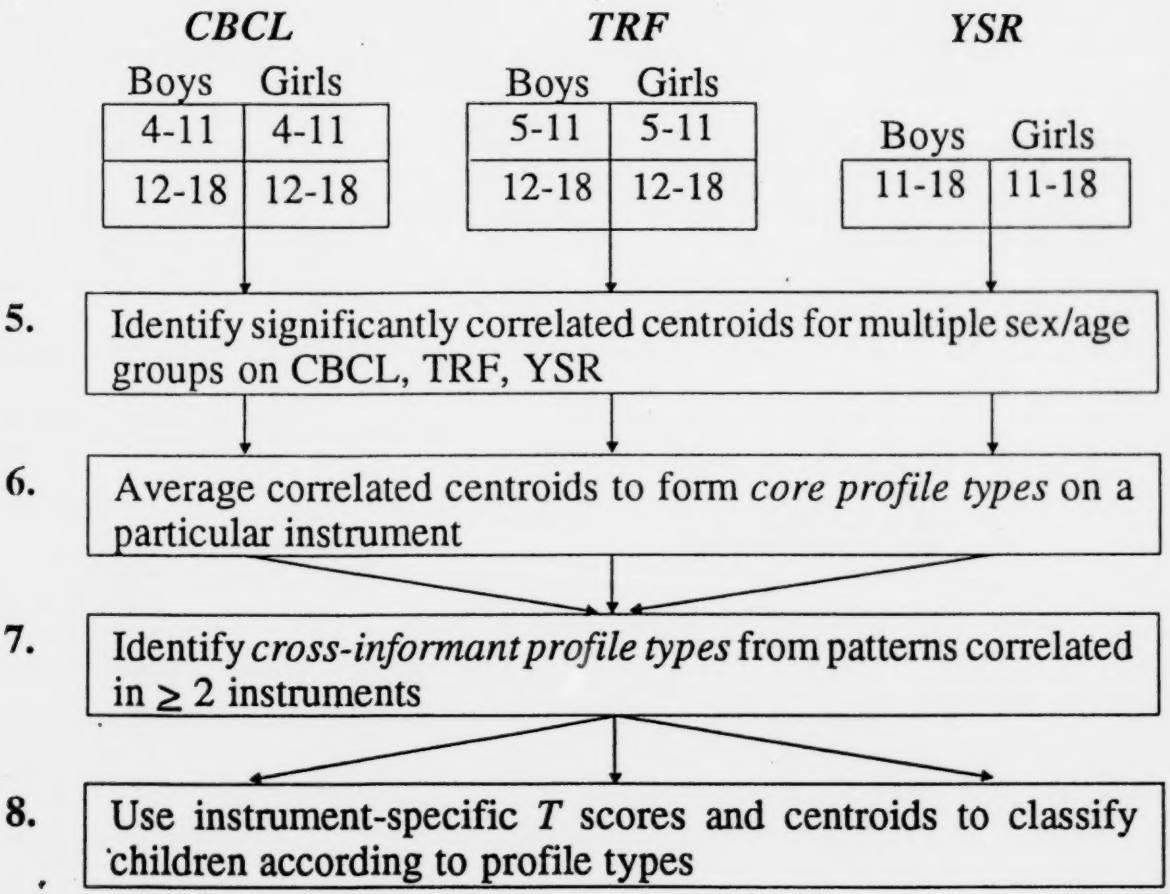
CBCL
Boys Girls
4-11 4-11
12-18 12-18
TRF
Boys Girls
5-11 5-11
12-18 12-18
YSR
Boys Girls
11-18 11-18
5. Identify significantly correlated centroids for multiple sex/age groups on CBCL, TRF, YSR
6. Average correlated centroids to form core profile types on a particular instrument
7. Identify cross-informant profile types from patterns correlated in ≥ 2 instruments
8. Use instrument-specific T scores and centroids to classify children according to profile types

Figure 8. Derivation of profile types (cont.).

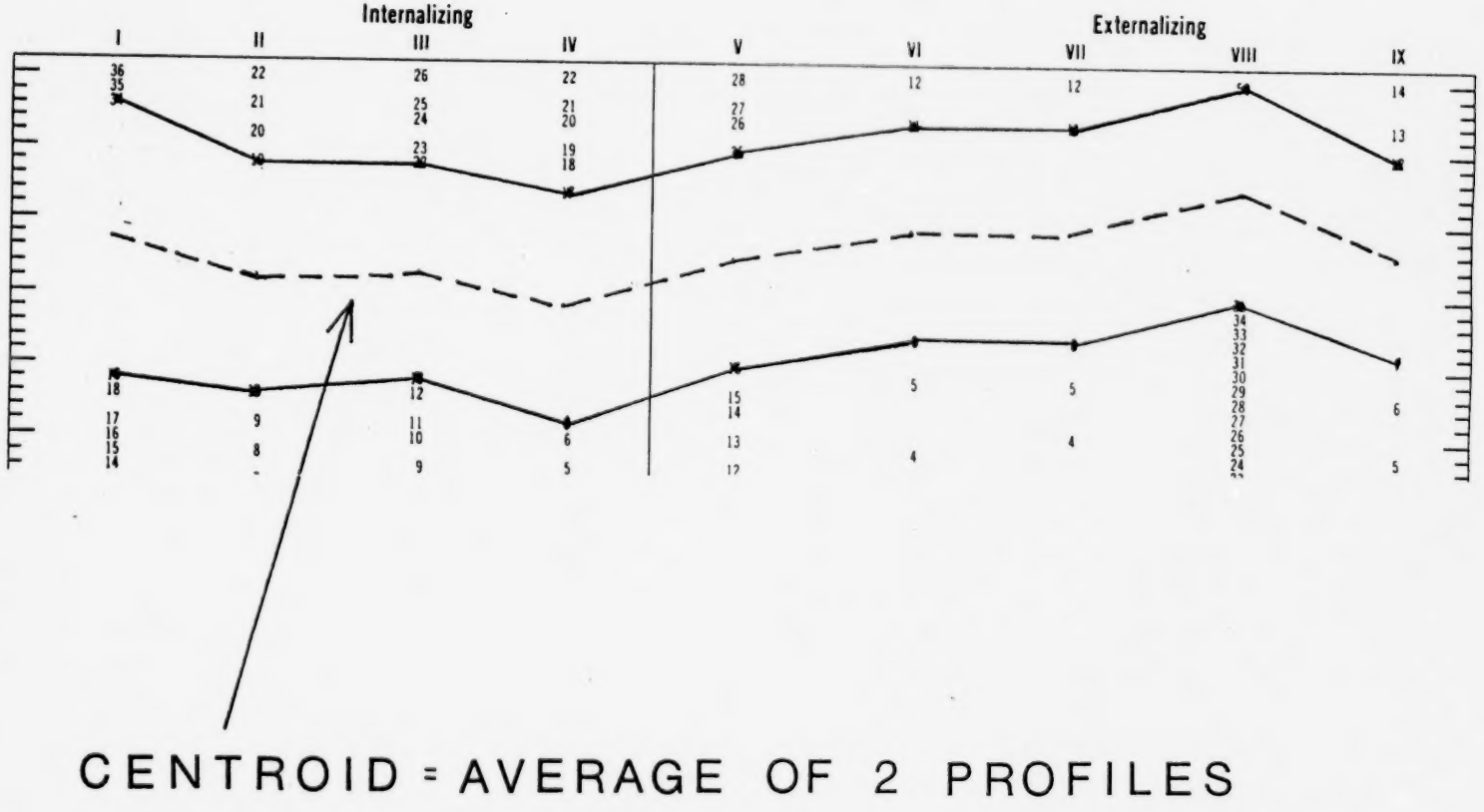

Figure 9. Illustration of a centroid as the average of two profiles.

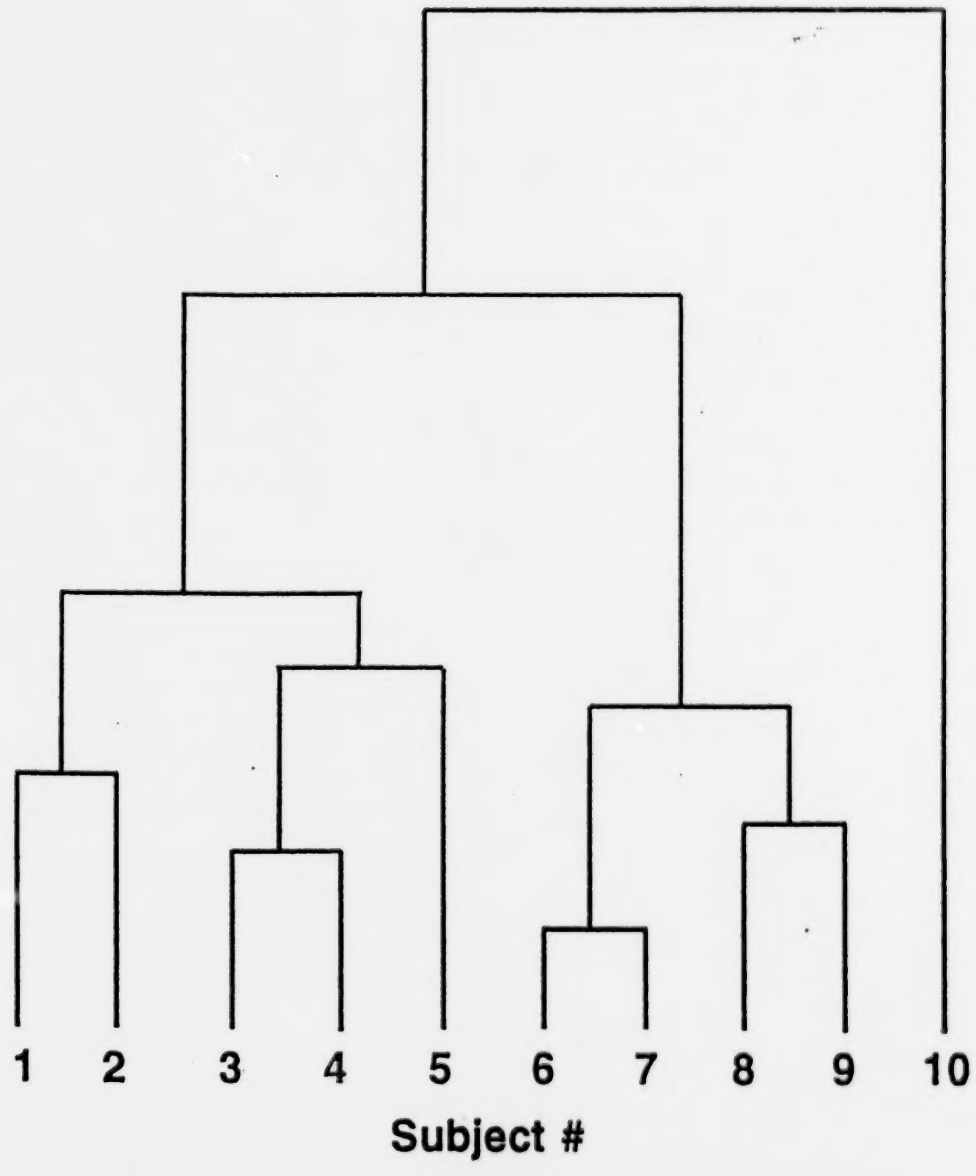

Figure 10. Illustration of a hierarchial clustering sequence.

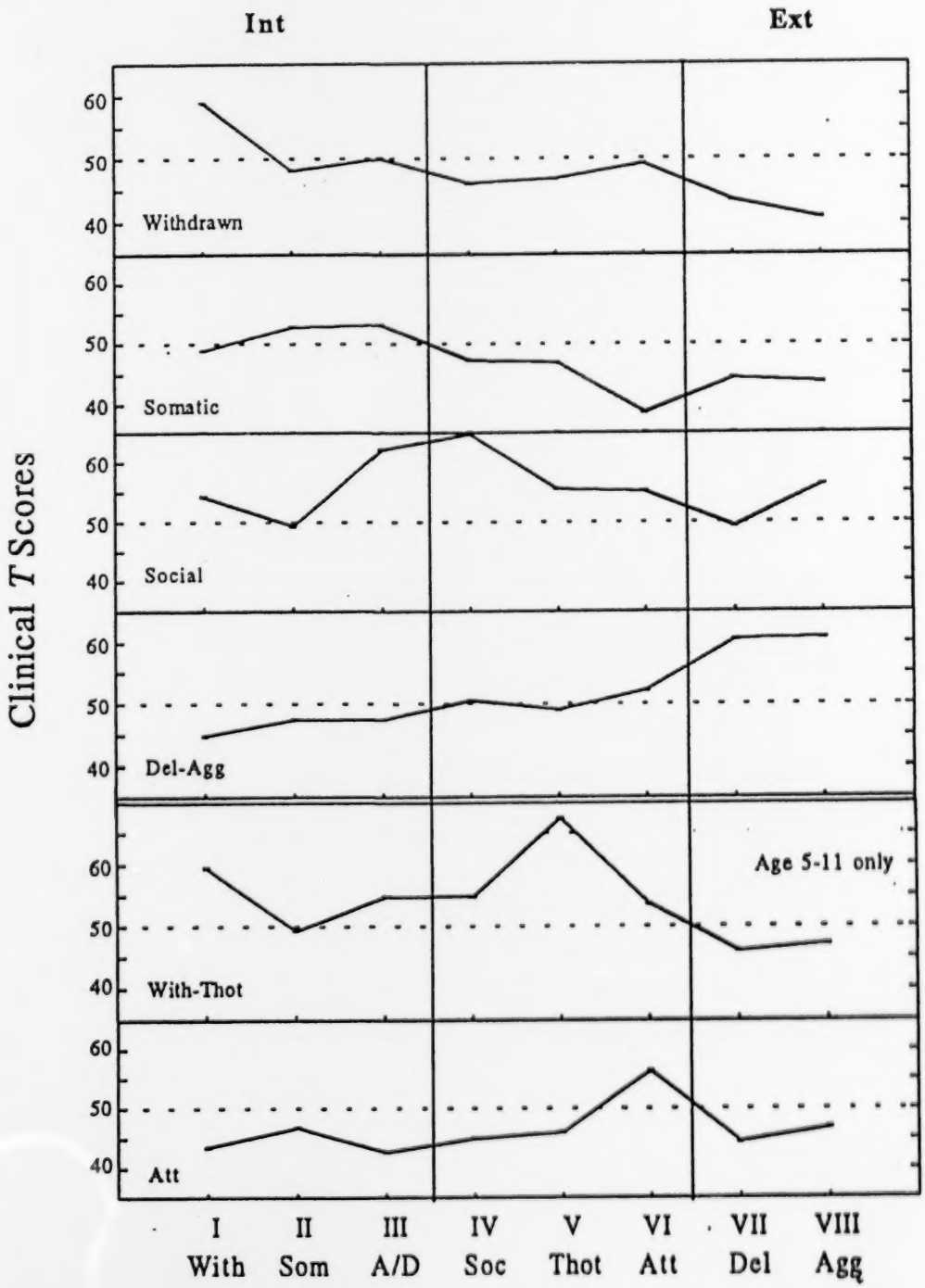

Figure 11. Centroids of TRF versions of cross-informant profile types (above double line) and profile types specific to the TRF (below double line).

Cross-Informant Comparison of Colin1 Colin2 Colin4 Colin5 Colin3. Comparison Date: 05/03/1993 Page 1.
Scores for 89 Problem Items Common to CBCL, YSR and TRF (Grouped by Syndrome Scale).
Some scales have additional items for only one or two informants.

Item	Mo CBC 1	Fa CBC 2	Tch TRF 3	Tch TRF 4	Slf YSR 5
I WITHDRAWN					
42. RatherBeAlone	2	2	2	1	2
65. Won't Talk	1	0	0	0	0
69. Secretive	2	2	0	1	2
75. Shy	2	2	1	1	2
102. Underactive	1	2	1	1	2
*103. Sad	2	2	M	0	2
111. Withdrawn	2	2	2	0	1
II SOMATIC COMPLAINTS					
51. Dizzy	0	0	0	0	0
54. Tired	0	0	0	0	2
56a. Aches	0	1	0	0	0
56b. Headaches	1	0	0	0	0
56c. Nausea	0	0	0	0	0
56d. Eye	0	0	0	0	0
56e. Skin	0	0	0	1	0
56f. Stomach	0	1	0	0	1
56g. Vomit	0	0	0	0	0
III ANXIOUS/DEPRESSED					
12. Lonely	0	0	2	1	2
14. Cries	0	0	0	0	0
31. FearDoBad	0	2	1	2	2
32. Perfect	2	2	1	2	2
33. Unloved	1	1	0	0	0
34. OutToGet	0	1	0	0	M
35. Worthless	2	2	1	1	2
*45. Nervous	2	2	1	1	2
50. Fearful	2	2	1	1	2
52. Guilty	1	2	0	1	2
71. SelfConsc	2	2	1	1	2
89. Suspic	0	1	0	1	2
*103. Sad	2	2	M	0	2
112. Worries	2	2	1	1	1

Item	Mo CBC 1	Fa CBC 2	Tch TRF 3	Tch TRF 4	Slf YSR 5
IV SOCIAL PROBLEMS					
* 1. Acts Young	0	1	1	1	0
11. Clings	0	0	2	1	0
25. NotGetAlong	1	2	1	1	2
38. Teased	2	2	0	1	2
48. NotLiked	0	2	1	1	2
*62. Clumsy	2	2	1	1	0
64. PrefersYoung	0	0	0	0	0
V THOUGHT PROBLEMS					
9. Mind Off	2	1	0	0	0
40. HearsThings	0	0	0	0	2
66. RepeatsActs	0	M	0	1	2
70. SeesThings	0	0	0	0	1
84. StrangeBehav	0	2	0	0	2
85. StrangeIdeas	0	0	0	0	0
VI ATTENTION PROBLEMS					
* 1. Acts Young	0	1	1	1	0
8. Concentrate	2	2	0	1	1
10. Sit Still	1	2	0	0	2
13. Confuse	1	2	1	1	2
17. Daydream	2	2	0	0	0
41. Impulsv	2	2	0	0	2
*45. Nervous	2	2	1	1	2
61. PoorSchool	1	0	0	0	1
*62. Clumsy	2	2	1	1	0
VII DELINQUENT BEHAVIOR					
26. NoGuilt	0	0	0	1	0
39. BadCompan	0	0	0	0	2
43. LieCheat	1	1	0	0	0
63. PrefOlder	M	2	1	1	M
82. StealOut	0	0	0	0	0
90. Swears	0	0	0	0	0
101. Truant	0	0	0	0	0
105. AlcDrugs	0	0	0	0	0

Item	Mo CBC 1	Fa CBC 2	Tch TRF 3	Tch TRF 4	Slf YSR 5
VIII AGGRESSIVE BEHAVIOR					
3. Argues	0	1	0	0	0
7. Brags	1	1	0	0	0
16. Mean	1	0	0	0	1
19. DemAttn	1	2	2	1	2
20. DestOwn	0	1	0	0	0
21. DestOthr	0	1	0	0	0
23. DisbSchl	0	0	0	0	0
27. Jealous	1	0	0	0	0
37. Fights	0	0	0	0	0
57. Attacks	0	0	0	0	0
68. Screams	0	0	0	0	0
74. ShowOff	1	1	0	1	0
86. Stubborn	1	1	0	1	1
87. MoodChng	1	2	0	0	2
93. TalkMuch	2	2	0	1	2
94. Teases	1	1	0	0	0
95. Temper	0	1	0	0	0
97. Threaten	0	0	0	0	1
104. Loud	1	2	0	0	1
OTHER PROBLEMS					
5. ActOppSex	0	0	1	2	0
18. HarmSelf	0	0	0	0	0
29. Fears	2	2	0	0	1
30. FearSchool	0	0	0	0	0
36. Accidents	0	1	0	0	0
44. BiteFingNa	0	0	1	1	0
46. Twitch	2	2	0	0	2
55. OverWeight	1	1	1	1	0
58. PickSkin	1	0	0	0	1
79. SpeechProb	0	1	0	1	0
83. StoresUp	0	2	0	0	2
91. TalkSuicide	0	0	0	0	0
96. ThinkSex	0	0	0	0	0
99. TooNeat	1	2	0	0	2

"Mo.CBCL.1" is ID# Colin1: Boy aged 11. Filled out on 05/18/89 by Mother. Cards 02,03; Agency 00.
"Fa.CBCL.2" is ID# Colin2: Boy aged 11. Filled out on 05/18/89 by Father. Cards 02,03; Agency 00.
"Tch.TRF.3" is ID# Colin4: Boy aged 11. Filled out on 05/31/89 by Teacher. Cards 02,03; Agency 00.
"Tch.TRF.4" is ID# Colin5: Boy aged 11. Filled out on 05/31/89 by Teacher. Cards 02,03; Agency 00.
"Slf.YSR.5" is ID# Colin3: Boy aged 11. Filled out on 05/18/89 by Youth. Cards 02,03; Agency 00.

* Item appears on more than one Cross-Informant Scale. ?? or M means missing data.

Figure 12. Cross-informant computer program printout of item scores and Q correlations between item scores from different informants.

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Q Correlations Between Item Scores from Different Informants Colin1 Colin2 Colin4 Colin5 Colin3 05/03/1993 P.2

For this Subject		For Reference Samples 25th %ile	Mean	75th %ile	Agreement between
Mo.CBCL.1 x Fa.CBCL.2 =	.68	.47	.58	.69	Mother and Father is average.
Mo.CBCL.1 x Tch.TRF.3 =	.25	.11	.24	.38	Mother and Teacher is average.
Mo.CBCL.1 x Tch.TRF.4 =	.25	.11	.24	.38	Mother and Teacher is average.
Mo.CBCL.1 x Slf.YSR.5 =	.44	.19	.29	.40	Mother and Youth is above average.
Fa.CBCL.2 x Tch.TRF.3 =	.34	.11	.24	.38	Father and Teacher is average.
Fa.CBCL.2 x Tch.TRF.4 =	.38	.11	.24	.38	Father and Teacher is average.
Fa.CBCL.2 x Slf.YSR.5 =	.60	.19	.29	.40	Father and Youth is above average.
Tch.TRF.3 x Tch.TRF.4 =	.61		There is no reference sample for this combination		
Tch.TRF.3 x Slf.YSR.5 =	.29	.07	.17	.28	Teacher and Youth is above average.
Tch.TRF.4 x Slf.YSR.5 =	.36	.07	.17	.28	Teacher and Youth is above average.

T Scores for 8 Syndrome Scales Common to CBCL, YSR and TRF

Scale	Mo.CBCL.1	Fa.CBCL.2	Tch.TRF.3	Tch.TRF.4	Slf.YSR.5	
1. Withdrawn	86++	92++	65	60	82++	
2. Somatic Complaints	56	61	50	57	56	
3. Anxious/Depressed	79++	88++	70+	73++	79++	
4. Social Problems	68+	80++	69+	68+	68+	
5. Thought Problems	67+	73++	50	58	75++	
6. Attention Problems	84++	92++	51	53	67+	
7. Delinquent Behavior	50	59	53	60	50	+Borderline Clinical Range
8. Aggressive Behavior	57	64	51	53	53	++Clinical Range
Internalizing	77++	83++	70++	71++	75++	
Externalizing	55	64++	51	55	52	
Total Problems	72++	78++	58	61+	69++	

Q Correlations Between 8 Scale Scores from Different Informants

For this Subject		For Reference Samples 25th %ile	Mean	75th %ile	Agreement between
Mo.CBCL.1 x Fa.CBCL.2 =	.99	.35	.58	.89	Mother and Father is above average.
Mo.CBCL.1 x Tch.TRF.3 =	.49	-.14	.23	.60	Mother and Teacher is average.
Mo.CBCL.1 x Tch.TRF.4 =	.22	-.14	.23	.60	Mother and Teacher is average.
Mo.CBCL.1 x Slf.YSR.5 =	.86	-.11	.26	.60	Mother and Youth is above average.
Fa.CBCL.2 x Tch.TRF.3 =	.58	-.14	.23	.60	Father and Teacher is average.
Fa.CBCL.2 x Tch.TRF.4 =	.31	-.14	.23	.60	Father and Teacher is average.
Fa.CBCL.2 x Slf.YSR.5 =	.84	-.11	.26	.60	Father and Youth is above average.
Tch.TRF.3 x Tch.TRF.4 =	.87		There is no reference sample for this combination		
Tch.TRF.3 x Slf.YSR.5 =	.61	-.15	.17	.50	Teacher and Youth is above average.
Tch.TRF.4 x Slf.YSR.5 =	.47	-.15	.17	.50	Teacher and Youth is average.

Intraclass Correlations (ICCs) with Cross-Informant Profile Types from Different Informants

ICC from	Cross-Informant Profile Types WITHDR	SOMAT	SOCIAL	DEL-AGG	
Mo.CBCL.1	.103	-.104	.167	-.471	
Fa.CBCL.2	-.231	-.391	.102	-.592	
Tch.TRF.3	.421	.633**	.053	-.532	** Significant ICC with profile type
Tch.TRF.4	.304	.738**	.059	-.427	
Slf.YSR.5	.158	-.425	.371	-.517	

Figure 13. Cross-informant computer program printout of scale scores and Q correlations between scale scores from different informants.

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EMPIRICALLY BASED TAXONOMY

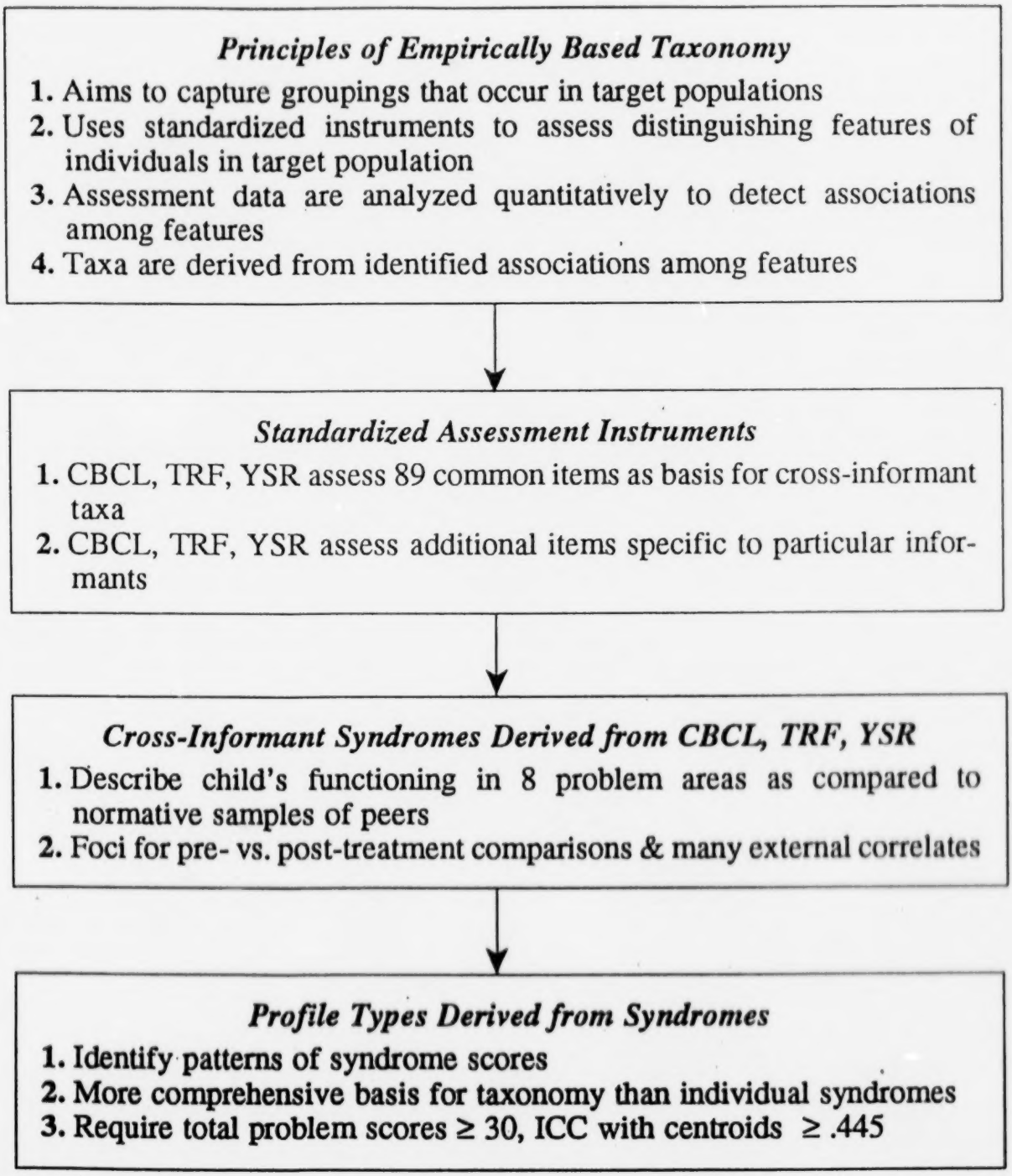
Principles of Empirically Based Taxonomy
1. Aims to capture groupings that occur in target populations
2. Uses standardized instruments to assess distinguishing features of individuals in target population
3. Assessment data are analyzed quantitatively to detect associations among features
4. Taxa are derived from identified associations among features
Standardized Assessment Instruments
1. CBCL, TRF, YSR assess 89 common items as basis for cross-informant taxa
2. CBCL, TRF, YSR assess additional items specific to particular informants
Cross-Informant Syndromes Derived from CBCL, TRF, YSR
1. Describe child's functioning in 8 problem areas as compared to normative samples of peers
2. Foci for pre- vs. post-treatment comparisons & many external correlates
Profile Types Derived from Syndromes
1. Identify patterns of syndrome scores
2. More comprehensive basis for taxonomy than individual syndromes
3. Require total problem scores ≥ 30, ICC with centroids ≥ .445

Figure 14. Current status of empirically based assessment and taxonomy.